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DALLAS OFFICE OF FULBRIGHT & JAWORSKI L.L.P.
2200 ROSS AVENUE
SUITE 2800
DALLAS, TX 75201-2784

EXAMINER	
MATTIS, JASON E	
ART UNIT	**PAPER NUMBER**
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/010,935	PRAGER ET AL.	
	Examiner	Art Unit	
	Jason E. Mattis	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-34,36-47,62 and 63* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 6-34, 36-47, and 62-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

2. This Office Action is in response to the Amendment After-Final filed 1/23/07. Due to the Applicant's arguments, prosecution has been re-opened. Claims 1-4, 6-34, 36-47, and 62-63 are currently pending in the application.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. (U.S. Publication US 2002/0077113 A1) in view of Chauncey et al. (U.S. Publication US 2002/0001337 A1).

With respect to claim 1, Spaling et al. discloses a wireless communications system **(See page 3 paragraph 39 and Figure 1 of Spaling et al. for reference to mobile radio cellular communications system 10, which is a wireless communications system)**. Spaling et al. also discloses a first subsystem having a first

subscriber data interface and a first digital interface **(See page 3 paragraph 39, page 5 paragraph 47, and Figures 1 and 5 of Spaling et al. for reference to radio network controller 22, which is a first subsystem, having an interface "To/From other networks", which is a first subscriber data interface, and having network interface 52, which is a first digital interface)**. Spaling et al. further discloses that the first subscriber data interface provides an interface compatible with a first general purpose protocol **(See page 3 paragraph 39 and Figure 1 of Spaling et al. for reference to the interface "To/From other networks" being an interface to networks such as the PSTN, the Internet, etc., meaning the interface uses a first protocol compatible with the type of network it is connected to)**. Spaling et al. also discloses that the first digital interface provides an interface compatible with a protocol other than the first general purpose protocol **(See page 3 paragraph 39 and Figure 1 of Spaling et al. for reference to the network connections that connects the RNS to the base stations being optical fiber links, meaning an optical fiber protocol is used for these links)**. Spaling et al. further discloses a second subsystem having a second subscriber data interface and a second digital interface **(See page 3 paragraph 39, page 5 paragraph 48, and Figures 1 and 5 of Spaling et al. for reference to base station 16, which is a second subsystem, having a wireless interface, which is a second subscriber data interface, and having network interface 60, which is a second digital interface)**. Spaling et al. also discloses that the second subscriber data interface provides an interface compatible with a wireless protocol **(See page 3 paragraph 39 and Figure 1 of Spaling et al. for reference to the interface being a**

wireless interface, meaning the interface must use a wireless protocol to communicate). Spaling et al. further discloses that the second digital interface is coupled to the first digital interface to provide communication of data between the subscriber data interfaces **(See page 3 paragraph 39, page 5 paragraphs 47-48, and Figures 1 and 5 of Spaling et al. for reference to network interface 52 being coupled to network interface 60 to provide communications from the wireless interface of the base station to the other network interface of the RNC)**. Spaling et al. does not disclose that the first and second subsystems are disposed at a subscriber location with the first subsystem being an indoor unit and the second subsystem being an outdoor unit.

With respect to claim 1, Chauncey et al. discloses a first and second subsystem disposed at a subscriber location with the first subsystem being an indoor unit and the second subsystem being an outdoor unit **(See page 3 paragraph 59, page 5 paragraphs 92-93, and Figures 1 and 7 of Chauncey et al. for reference to a subscriber system comprising a first subsystem 12 and a second subsystem 14 located at a subscriber location with subsystem 12 being and indoor unit and the subsystem 14 being an outdoor subsystem)**. Using a first and second subsystem disposed at a subscriber location with the first subsystem being an indoor unit and the second subsystem being an outdoor unit has the advantage of allowing the equipment of the first subsystem to be protected from the elements in an indoor environment while allowing the signal strength of the wireless signal sent from the second subsystem to be maximized by having the transceiver in an open environment.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Chauncey et al., to combine using a first and second subsystem disposed at a subscriber location with the first subsystem being an indoor unit and the second subsystem being an outdoor unit, as suggested by Chauncey et al., with the system and method of Spaling et al., with the motivation being to allow the equipment of the first subsystem to be protected from the elements in an indoor environment while allowing the signal strength of the wireless signal sent from the second subsystem to be maximized by having the transceiver in an open environment.

With respect to claim 22, Spaling et al. discloses a third subsystem with a third subscriber data interface compatible with the wireless protocol and a third digital interface coupled to the first digital interface to provide communication between the first and third subscriber interfaces **(See page 3 paragraph 39 and Figure 1 of Spaling et al. for reference to another base station 18, which is a third subsystem, with the same components as base station 16 and for reference to base station 18 also being coupled to the network interface of the RNC 12).**

5. Claims 6, 9, 10, 14, 33-34, 36-37, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al. and in further view of Pirhonen et al. (U.S. Pat. 6970441 B1).

With respect to claim 6, Spaling et al. does not disclose that the first subsystem provides only digital processing of the subscriber data.

With respect to claim 10, Spaling et al. does not disclose that the second subsystem provides all analog processing of subscriber data.

With respect to claim 33, Spaling et al. discloses a method for providing wireless subscriber data signal processing **(See page 3 paragraph 39 and Figure 1 of Spaling et al. for reference to a radio cellular communications system 10 implementing a wireless data signal processing method)**. Spaling et al. also discloses providing a first signal processing subsystem providing and a second signal processing subsystem **(See page 5 paragraphs 47-48 and Figure 5 of Spaling et al. for reference to a base station, which is a second signal processing subsystem, and a RNC, which is a first signal processing subsystem)**. Spaling et al. further discloses coupling the first and second signal processing subsystems using a digital link **(See page 3 paragraph 39, page 5 paragraphs 47-48, and Figures 1 and 5 of Spaling et al. for reference to coupling the base station to the RNC using optical fiber links, which are digital links)**. Spaling et al. does not disclose that the first and second subsystems are disposed at a subscriber location with the first subsystem being an indoor unit and the second subsystem being an outdoor unit. Spaling et al. also does not disclose the first subsystem providing only digital signal processing and the second subsystem providing both analog and digital signal processing.

With respect to claim 33, Chauncey et al. discloses a first and second subsystem disposed at a subscriber location with the first subsystem being an indoor

unit and the second subsystem being an outdoor unit **(See page 3 paragraph 59, page 5 paragraphs 92-93, and Figures 1 and 7 of Chauncey et al. for reference to a subscriber system comprising a first subsystem 12 and a second subsystem 14 located at a subscriber location with subsystem 12 being and indoor unit and the subsystem 14 being an outdoor subsystem)**. Using a first and second subsystem disposed at a subscriber location with the first subsystem being an indoor unit and the second subsystem being an outdoor unit has the advantage of allowing the equipment of the first subsystem to be protected from the elements in an indoor environment while allowing the signal strength of the wireless signal sent from the second subsystem to be maximized by having the transceiver in an open environment.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Chauncey et al., to combine using a first and second subsystem disposed at a subscriber location with the first subsystem being an indoor unit and the second subsystem being an outdoor unit, as suggested by Chauncey et al., with the system and method of Spaling et al., with the motivation being to allow the equipment of the first subsystem to be protected from the elements in an indoor environment while allowing the signal strength of the wireless signal sent from the second subsystem to be maximized by having the transceiver in an open environment.

With respect to claims 6, 10, and 33, Pirhonen et al., in the field of communications discloses a base station controller providing only digital signal processing and a base station that provides digital signal processing as well as all

analog signal processing **(See column 3 lines 11-35 and Figure 2 of Pirhonen et al. for reference to a base station, BTS 200, that receives analog radio signals, performs all analog processing to convert the analog radio signals into digital signals, and communicates the digital signals via digital transmission links 218 to a base station controller, BSC 214, that performs only digital processing on the signals before communicating the digital signals via digital transmission links 220 to a mobile services switching center, MSC 216)**. Using a first subsystem providing only digital signal processing and a second subsystem that provides digital signal processing as well as all analog signal processing has the advantage of allowing the total conversion of radio waves into digital signals to be performed by a single device such that faster digital transmission links may be used by the rest of the system devices.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Prihonen et al., to combine using a first subsystem providing only digital signal processing and a second subsystem that provides digital signal processing as well as all analog signal processing, as suggested by Pirhonen et al., with the system and method of Spaling et al. and Chauncey et al., with the motivation being to allow the total conversion of radio waves into digital signals to be performed by a single device such that faster digital transmission links may be used by the rest of the system devices.

With respect to claim 9, Spaling et al. discloses that the first digital interface comprises a fiber optic interface **(See page 3 paragraph 39 and Figure 1 of Spaling**

et al. for reference to the base station being coupled to the RNC using optical fiber links).

With respect to claim 14, Spaling et al. discloses that the second digital interface comprises a fiber optic interface **(See page 3 paragraph 39 and Figure 1 of Spaling et al. for reference to the base station being coupled to the RNC using optical fiber links).**

With respect to claim 34, Spaling discloses that the digital link comprises a fiber optic link **(See page 3 paragraph 39 and Figure 1 of Spaling et al. for reference to the base station being coupled to the RNC using optical fiber links).**

With respect to claim 36, Spaling et al. discloses coupling the first subsystem to a subscriber data communication backbone **(See page 3 paragraph 39 and Figure 1 of Spaling et al. for reference to an interface "To/From other networks" being an interface that couples the RNC to other networks, which are subscriber data communication backbone networks).**

With respect to claim 37, Spaling et al. discloses that the communication backbone comprises the Internet **(See page 3 paragraph 39 and Figure 1 of Spaling et al. for reference to the RNC being coupled to the Internet).**

With respect to claim 42, Spaling et al. discloses coupling the second subsystem to a wireless subscriber data communication channel **(See page 3 paragraph 39 and Figure 1 of Spaling et al. for reference to the base station being coupled to a wireless interface of a wireless communication channel).**

6. Claims 11-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al. and Prihonen et al. as applied to claims 6, 9, 10, 14, 33-34, 36-37, and 42 above, and further in view of Nanao et al. (U.S. Publication US 2003/0008683 A1).

With respect to claim 11, the combination of Spaling et al., Chauncey et al. and Prihonen et al. does not specifically disclose that the second subsystem comprises a frequency converter.

With respect to claim 12, the combination of Spaling et al., Chauncey et al. and Prihonen et al. does not specifically disclose that the second subsystem comprises at least one amplifier.

With respect to claims 11 and 12, Nanao et al., in the field of communications, discloses a base station comprising a frequency converter and an amplifier **(See page 1 paragraph 21 of Nanao et al. for reference to a base station including an amplifier device comprising both a high-frequency converting/spread modulating portion 103, and an amplifier 105)**. Using a second subsystem comprising a frequency converter and an amplifier has the advantage of allowing higher power signals to be wirelessly transmitted to reduce signal deterioration.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Nanao et al., to combine using a second subsystem comprising a frequency converter and an amplifier, as suggested by Nanao et al., with the system and method of Spaling et al., Chauncey et al., and Prihonen et

al., with the motivation being to allow higher power signals to be wirelessly transmitted to reduce signal deterioration.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al. and in further view of Van Lieshout et al. (U.S. Publication US 2004/0203714 A1).

With respect to claim 2, the combination of Spaling et al. and Chauncey et al. does not disclose using a protocol selected from the group of T1, T3, E1, E3, OC-1, OC-3, OC-12, and ISDN.

With respect to claim 2, Van Lieshout et al., in the field of communications, discloses using ISDN **(See page 1 paragraph 8 of Van Lieshout et al. for reference to a RNC using ISDN protocol in a backhaul connection to another network)**. Using ISDN protocol has the advantage of allowing the users of the wireless network to communicate with users of an IDSN network.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Van Lieshout et al., to combine using ISDN, as suggested by Van Lieshout et al., with the system and method of Spaling et al. and Chauncey et al., with the motivation being to allow the users of the wireless network to communicate with users of an IDSN network.

8. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al. and Pirhonen et al. and in further view of Van Lieshout et al. (U.S. Publication US 2004/0203714 A1).

With respect to claim 38, the combination of Spaling et al., Chauncey et al., and Pirhonen et al. does not disclose using a protocol selected from the group of T1, T3, E1, E3, OC-1, OC-3, OC-12, and ISDN.

With respect to claim 38, Van Lieshout et al., in the field of communications, discloses using ISDN **(See page 1 paragraph 8 of Van Lieshout et al. for reference to a RNC using ISDN protocol in a backhaul connection to another network)**. Using ISDN protocol has the advantage of allowing the users of the wireless network to communicate with users of an IDSN network.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Van Lieshout et al., to combine using ISDN, as suggested by Van Lieshout et al., with the system and method of Spaling et al., Chauncey et al., and Pirhonen et al. with the motivation being to allow the users of the wireless network to communicate with users of an IDSN network.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al. and in further view of Eyuboglu et al. (U.S. Publication US 2002/0196749 A1).

With respect to claim 3, the combination of Spaling et al. and Chauncey et al. does not disclose using Ethernet protocol.

With respect to claim 3, Eyuboglu et al., in the field of communications, discloses using Ethernet protocol **(See page 1 paragraph 5 of Eyuboglu et al. for reference to a RNC using Ethernet protocol in a backhaul connection to another network)**. Using Ethernet protocol has the advantage of allowing the users of the wireless network to communicate with users of an Ethernet network.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Eyuboglu et al., to combine using Ethernet, as suggested by Eyuboglu et al., with the system and method of Spaling et al. and Chauncey et al., with the motivation being to allow the users of the wireless network to communicate with users of an Ethernet network.

10. Claims 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al. and Pirhonen et al. and in further view of Eyuboglu et al. (U.S. Publication US 2002/0196749 A1).

With respect to claim 39, the combination of Spaling et al., Chauncey et al., and Pirhonen et al. does not disclose using Ethernet protocol.

With respect to claim 39, Eyuboglu et al., in the field of communications, discloses using Ethernet protocol **(See page 1 paragraph 5 of Eyuboglu et al. for reference to a RNC using Ethernet protocol in a backhaul connection to another network)**. Using Ethernet protocol has the advantage of allowing the users of the wireless network to communicate with users of an Ethernet network.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Eyuboglu et al., to combine using Ethernet, as suggested by Eyuboglu et al., with the system and method of Spaling et al., Chauncey et al., and Pirhonen et al., with the motivation being to allow the users of the wireless network to communicate with users of an Ethernet network.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al. and in further view of Marin et al. (U.S. Publication US 2002/0174441 A1).

With respect to claim 4, the combination of Spaling et al. and Chauncey et al. does not disclose using SONET protocol, which is a synchronous signal protocol.

With respect to claim 4, Marin et al. discloses using SONET protocol **(See page 2 paragraph 25 and Figure 2 of Marin et al. for reference to using SONET protocol in a backhaul connection)**. Using SONET protocol has the advantage of allowing the users of the wireless network to communicate with users of a SONET network.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Marin et al., to combine using SONET protocol, as suggested by Marin et al., with the system and method of Spaling et al. and Chauncey et al., with the motivation being to allow the users of the wireless network to communicate with users of a SONET network.

12. Claims 40 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al. and Pirhonen et al. and in further view of Marin et al. (U.S. Publication US 2002/0174441 A1).

With respect to claims 40 and 47, the combination of Spaling et al., Chauncey et al., and Pirhonen et al. does not disclose using SONET protocol, which is a synchronous signal protocol.

With respect to claims 40 and 47, Marin et al. discloses using SONET protocol **(See page 2 paragraph 25 and Figure 2 of Marin et al. for reference to using SONET protocol in a backhaul connection)**. Using SONET protocol has the advantage of allowing the users of the wireless network to communicate with users of a SONET network.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Marin et al., to combine using SONET protocol, as suggested by Marin et al., with the system and method of Spaling et al., Chauncey et al., and Pirhonen et al., with the motivation being to allow the users of the wireless network to communicate with users of a SONET network.

13. Claims 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al in view of Chauncey et al.

With respect to claims 28-31, although the combination of Spaling et al. and Chauncey et al. does not specifically disclose using multi-port data routing and multi-port data switching, these functionalities are old and well known in the art of

communications. Using multi-port data routing and multi-port data switching has the advantage of allowing multiple data links to be connected from one device to many other devices using the same network interface.

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine using multi-port data routing and multi-port data switching with the system and method of Spaling et al. and Chauncey et al., with the motivation being to allow multiple data links to be connected from one device to many other devices using the same network interface.

With respect to claim 32, although the combination of Spaling et al. and Chauncey et al. does not specifically disclose providing broadband interfaces, providing broadband interfaces for a wireless network as well as a wired backhaul network is old an well known in the art of communications. Providing broadband interfaces for a wireless network as well as a wired backhaul network has the advantage of providing high-speed data services to users of the system.

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine providing broadband interfaces for a wireless network as well as a wired backhaul network with the system and method of Spaling et al. and Chauncey et al., with the motivation being to provide high-speed data services to users of the system.

14. Claims 7-8, 13, and 62-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al. and Pirhonen et al. and in further view of Dapper et al. (U.S. Pat. 6275990 B1).

With respect to claims 7-8, 13, and 62-63, the combination of Spaling et al., Chauncey et al., and Pirhonen et al. does not disclose using an OFDM digital modem and a digital multiplexer to process signals.

With respect to claims 7-8, 13, and 62-63, Dapper et al., in the field of communications, discloses using an OFDM digital modem and a digital multiplexer to process signals **(See column 78 line 51 to column 80 line 10 and Figure 37 of Dapper et al. for reference to using a digital OFDM modem and a digital multiplexer to process signals)**. Using an OFDM digital modem and a digital multiplexer to process signals has the advantage of allowing a system to process and route OFDM signals on multiple channels such that bandwidth is used more efficiently.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Dapper et al., to combine using an OFDM digital modem and a digital multiplexer to process signals, as suggested by Dapper et al., with the system and method of Spaling et al., Chauncey et al., and Pirhonen et al., with the motivation being to allow a system to process and route OFDM signals on multiple channels such that bandwidth is used more efficiently.

15. Claims 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al. and in further view of Cam et al. (U.S. Publication US 2002/0126704 A1).

With respect to claims 15-20, the combination of Spaling et al. and Chauncey et al. does not disclose using SONET, which is a synchronous communication protocol, with training and timing overhead bits added.

With respect to claims 15-20, Cam et al., in the field of communications, discloses using SONET, which is a synchronous communication protocol, with training and timing overhead bits added **(See page 1 paragraph 10 and page 2 paragraph 16 of Cam et al. for reference to using SONET protocol with training and timing overhead bit patterns)**. Using SONET protocol with training and timing overhead bit patterns has the advantage of using a well-known protocol to communicate quickly and efficiently communicate information in a fiber optic link.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Cam et al., to combine using SONET protocol with training and timing overhead bit patterns, as suggested by Cam et al., with the system and method of Spaling et al. and Chauncey et al., with the motivation being to use a well-known protocol to communicate quickly and efficiently communicate information in a fiber optic link.

16. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al. and Cam et al and in further view of Barsheshet (U.S. Publication US 2003/0043738 A1).

With respect to claim 21, the combination of Spaling et al., Chauncey et al., and Cam et al. does not disclose using resilient packet ring access protocol.

With respect to claim 21, Barsheshet, in the field of communications, discloses using resilient packet ring access protocol **(See page 1 paragraph 4 for reference to using resilient packet ring access protocol)**. Using resilient packet ring access protocol has the advantage of using a high-speed efficient packet communication protocol.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Barsheshet, to combine using resilient packet ring access protocol, as suggested by Barsheshet, with the system and method of Spaling et al., Chauncey et al., and Cam et al., with the motivation being to use a high-speed efficient packet communication protocol.

17. Claims 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al. and in further view of Schilling (U.S. Publication US 2003/0161386 A1).

With respect to claim 23, the combination of Spaling et al. and Chauncey et al. does not disclose that the third subsystem is connected to the first subsystem through the same link that connects the first subsystem and the second subsystem.

With respect to claim 23, Schilling discloses subsystems linked together in a daisy chain **(See page 3 paragraphs 36-40 and Figure 2 of Schilling for reference to base stations and a controller linked together in a daisy-chain)**. Using subsystems linked together in a daisy chain has the advantage of allowing the amount of fiber used to connected the system to be reduced since all subsystems do not need to connect to a central subsystem directly.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Schilling, to combine using subsystems linked together in a daisy chain, as suggested by Schilling, with the system and method of Spaling et al. and Chauncey et al., with the motivation being to allow the amount of fiber used to connected the system to be reduced since all subsystems do not need to connect to a central subsystem directly.

With respect to claims 24 and 25, Spaling et al. discloses multiple subsystems connected directly to a multi-port device the first subsystem using fiber optic links **(See page 3 paragraph 39 and Figure 1 of Spaling et al. for reference to both base stations 16 and 18 connected directly to RNC 12 through multiple ports of the RNC 12 using optical fiber links)**.

With respect to claims 26 and 27, although Spaling et al., Chauncey et al., and Schilling do not specifically disclose using multi-port data routers and multi-port data switches, these devices are old and well known in the art of communications. Using multi-port data router and multi-port data switches has the advantage of allowing

multiple data links to be connected from one device to many other devices using the same network interface.

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine using multi-port data router and multi-port data switches with the system and method of Spaling et al. and Schilling, with the motivation being to allow multiple data links to be connected from one device to many other devices using the same network interface.

18. Claims 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al. Pirhonen et al. and in further view of Schilling (U.S. Publication US 2003/0161386 A1).

With respect to claim 43, the combination of Spaling et al., Chauncey et al., and Pirhonen et al does not disclose that the third subsystem is connected to the first subsystem through the same link that connects the first subsystem and the second subsystem.

With respect to claim 43, Schilling discloses subsystems linked together in a daisy chain **(See page 3 paragraphs 36-40 and Figure 2 of Schilling for reference to base stations and a controller linked together in a daisy-chain)**. Using subsystems linked together in a daisy chain has the advantage of allowing the amount of fiber used to connected the system to be reduced since all subsystems do not need to connect to a central subsystem directly.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Schilling, to combine using subsystems linked together in a daisy chain, as suggested by Schilling, with the system and method of Spaling et al., Chauncey et al., and Pirhonen et al, with the motivation being to allow the amount of fiber used to connected the system to be reduced since all subsystems do not need to connect to a central subsystem directly.

With respect to claims 44 and 45, Spaling et al. discloses multiple subsystems connected directly to a multi-port device the first subsystem using fiber optic links **(See page 3 paragraph 39 and Figure 1 of Spaling et al. for reference to both base stations 16 and 18 connected directly to RNC 12 through multiple ports of the RNC 12 using optical fiber links)**.

19. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al. Pirhonen et al. and in further view of Barsheshet.

With respect to claim 41, the combination of Spaling et al., Chauncey et al., and Pirhonen et al does not disclose using resilient packet ring access protocol.

With respect to claim 41, Barsheshet, in the field of communications, discloses using resilient packet ring access protocol **(See page 1 paragraph 4 for reference to using resilient packet ring access protocol)**. Using resilient packet ring access protocol has the advantage of using a high-speed efficient packet communication protocol.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Barsheshet, to combine using resilient packet ring access protocol, as suggested by Barsheshet, with the system and method of Spaling et al., Chauncey et al., and Pirhonen et al, with the motivation being to use a high-speed efficient packet communication protocol.

20. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spaling et al. in view of Chauncey et al., Pirhonen et al., and Schilling and further in view of Barsheshet.

With respect to claim 46, the combination of Spaling et al., Chauncey et al., Pirhonen et al., and Schilling does not disclose using resilient packet ring access protocol.

With respect to claim 46, Barsheshet, in the field of communications, discloses using resilient packet ring access protocol **(See page 1 paragraph 4 for reference to using resilient packet ring access protocol)**. Using resilient packet ring access protocol has the advantage of using a high-speed efficient packet communication protocol.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Barsheshet, to combine using resilient packet ring access protocol, as suggested by Barsheshet, with the system and method of Spaling et al., Chauncey et al., Pirhonen et al., and Schilling, with the motivation being to use a high-speed efficient packet communication protocol.

Response to Arguments

21. The Applicant's argument that Spaling does not disclose a "first subscriber subsystem" and a "second subscriber subsystem" both "disposed a subscriber location" is moot. The Applicant's original specification and claims do not ever disclose limiting the first and second subsystems to being subscriber subsystems located at a subscriber location. The original specification and claims only discuss the fact that the data being processed by the subsystems is subscriber data. Since both a base station and RNC, as disclosed by Spaling et al. process subscriber data, Spaling et al. does disclose the limitations as defined by the original specification. It is recommended that the current claim language be amended such that it does not add limitation not supported by the original specification.

22. The Applicant's arguments regarding claims 6, 10, 11, and 12 are persuasive. Therefore, the previous ground of rejection have been withdrawn; however, new grounds of rejection have been added in view of Pirhonen et al. and Nanao et al., as shown above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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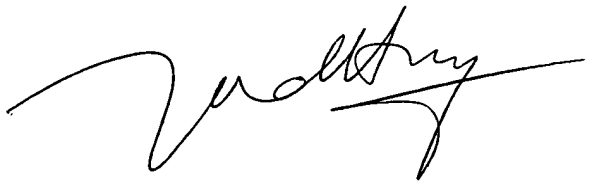

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600